

In re PREVIDI ET AL., Application No. 10/811,626  
Amendment A

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to FIGs. 9B and 9C. These two sheets replace the original sheets including FIGs. 9B and 9C. FIGs. 9B and 9C now no longer contain the typographical errors.

Attachment: Two Replacement Sheets  
Two Annotated Sheets Showing Changes

### **REMARKS**

The Office action dated September 25, 2007, and the references cited have been fully considered. In response, please enter the amendments and consider the remarks presented herein. Reconsideration and/or further prosecution of the application is respectfully requested.

Applicants appreciate the thoughtful examination of the application. Applicants also appreciate the Office returning the initialed, signed and dated 1449's indicating their full consideration of the submitted references.

Applicants have corrected typographical errors in FIGs. 9B and 9C.

Applicants will discuss the claim amendments after discussing the original filed application and the prior art of record.

As discussed in the original disclosure, progressive updates (e.g., by incrementally increasing and/or decreasing costs associated with links in one embodiment) can be used to update routing information in a network, such as in transitioning to or from a backup route. An example of twenty updates is discussed on page 26, first paragraph, of the original disclosure. Updating the routing information of a router require resources to determine the new routing information, and then resources to updating its routing tables/sets of routing information with the new routing information. As discussed in the original disclosure, one embodiment, when it expects more updates in a series of progressive routing updates, determines whether or not the next hop information has changed in the determined routing update. If it has not, then, as the router expects a next progressive update, the router determines not to update the routing tables/sets of routing information at the present time (as a next progressive update will be received shortly). If the nexthop information has changed, then the routing tables/sets of routing information are updated.

A portion of the original disclosure, from page 30, line 8 to page 31, line 3 is reproduced hereinafter, and discusses an aspect of one embodiment..

"This advertising of progressive values of network metrics (e.g., link costs/distances) is applicable to transitioning to a backup route, transitioning

from a backup route, and transitioning in response to other network topology and/or configuration changes. When a node receives a routing update, it typically updates one or more data structures (e.g., LSDB) with the new value(s), calculates new routes (e.g., determines the new SPF), updates one or more instances of the routing information base (RIB) and the forwarding information base (FIB). Using the technique of varying costs, rather than an immediate step change in value, causes this processing and updating to be performed many multiples of times (e.g., twenty times in the previous example).

In order to avoid this induced extra processing and route updating on each of the nodes, a node advertising an incremental route update may send out a link state packet (LSP) indicating the change in the metric (e.g., cost, distance, etc.), as well as an indication that the receiving node may expect to receive one or more subsequent updates associated with the incremental changes. The receiving node performs its SPF or other routing calculation to identify the resultant routing table. However, as the node expects a new value (e.g., that corresponding to the next incremental increase in the routing metric), the node identifies whether the change is sufficiently important to warrant updating its routing tables (e.g., RIB, FIB). One embodiment only updates these routing tables if the next hop information (e.g., destination address of the next hop, outgoing interface to reach the next hop) has changed. Otherwise, the routing tables are not updated (e.g., BGP is not notified of the resulting changes, nor are the linecards updated with the new FIB information). Additionally, a time-out or other fault detection mechanism is typically employed by a receiving node to update the routing tables should an expected routing update packet not be received within an appropriate timeframe."

More specifically in regards to the claims, all claims recite a limitations corresponding to maintaining (e.g., initially storing and updating) one or more set of routing information, and receiving a progressive series of updates. In response to determining an expectation of receiving a next progressive update and determining that an updated set of routing information (albeit changing one or more routes) does not change nexthop information, the determined routing update is not applied to the maintained one or more sets of routing information.

In regards to the claim amendments, Applicants have taken this opportunity to change the claim format of claims 1-4 into Applicants' currently preferred claim format of apparatus claims reciting one or more processing elements and memory, with support at least provided by

pages 32-33 and FIG. 11 of the original disclosure. Additionally, claim 1 is re-written to clean it up by moving limitations into other limitations, and to explicitly recite that the routing update is not applied, even though it contains updated routes, in response to expecting a next progressive update and determining that nexthop information has not changed. Support for these amendment is provided at least by original claim 1 and the discussion *supra*. Claim 2 is updated to recite that a second routing update of the progressive sets of updates is applied (as this is a method claim and if the first update is not applied in claim 1, it does not make sense that it is applied per claim 2 with a different conditional inconsistent with claim 1). Support for these amendments is provided at least by original claims 1 and 2 and the discussion *supra*. Finally, claim 4 is amended to recite that the timeout occurs after the determination of not to update, with support provides at least by the discussion *supra*. Claims 5, 7, 8, 9, 11, 12 and 13 are amended in a consistent manner as that discussed *supra*. Additionally, new method claims 14-17 are added and are written in a method claim format and directly based on claims 1-4, respectively.

In regards to the claim rejections based on prior art, Applicants agree with the Office that Dravida et al., US Patent 5,253,248 teaches the updating of routing information in the network. However, Applicants respectfully submit that all pending claims are allowable over the prior art of record. As discussed herein, the claims require the determination of not to apply a routing update in response to an expectation of at least one more update in the progressive set of updates and that this intermediate updated information does not change next hop information. The prior art of record neither teaches nor suggests this limitation. Moreover, claims 3, 5-7, 10, 12-13, and 16 recite a limitation that the received update information includes a value or other indication that there are more progressive updates forthcoming. The prior art of record neither teaches nor suggests this limitation.

For at least these reasons, the prior art of record neither teaches nor suggests all of the limitations of any pending claim. Moreover, Assuming the Office performed its duty as required by MPEP § 706 and 37 CFR 1.104(c)(2) and cited the best art available, then all claims

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are allowable over the best prior art available. Therefore, Applicants respectfully request all claim rejections be withdrawn and all claims allowed.


**Final Remarks.** In view of the above remarks and for at least the reasons presented herein, all pending claims are believed to be allowable over all prior art of record, the application is considered in good and proper form for allowance, and the Office is respectfully requested to issue a timely Notice of allowance in this case. Applicant requests any and all rejections and/or objections be withdrawn. If, in the opinion of the Office, a telephone conference would expedite the prosecution of the subject application, the Office is invited to call the undersigned attorney, as Applicants are open to discussing, considering, and resolving issues.

Applicants request a two-month extension of time is required. Should a different extension of time be deemed appropriate, Applicants hereby petition for such deemed extension of time. Applicants further authorize the charging of Deposit Account No. 501430 for any fees that may be due in connection with this paper (e.g., claim fees, extension of time fees) as required in addition to the payment made herewith using EFS-Web.

Respectfully submitted,  
**The Law Office of Kirk D. Williams**

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By



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